FOLEY:LARDNER
ATTORNEYS AT LAW
11250 EL CAMINO REAL, SUITE 200
SAN DIEGO, CA 92130
P.O. BOX 80278
SAN DIEGO, CALIFORNIA 92138-0278
TELEPHONE: 858.847.6700
FACSIMILE: 858.792.6773
WWW.FOLEYLARDNER.COM

OFFICIAL

RECEIVED
CENTRAL FAX CENTER
SEP 26 2003

FACSIMILE TRANSMISSION

Total # of Pages 16 (including this page)

TO:	PHONE #:	FAX #:
United States Patent and Trademark Office Attn: Examiner Gail Gabel; Art Unit: 1641	703-305-0807	703-308-4242

From : Barry S. Wilson
Date : September 25, 2003
Client/Matter No : 071949-2106
User ID No : 3067

MESSAGE:

Re: US Patent Application No. 09/687,051
Our Ref.: 071949-2106

Attached please find:

- Transmittal (1 pg.);
- Communication to the Examiner (4 pgs.);
- Exhibit A (10 pgs.).

If there are any problems with this transmission or if you have not received all of the pages, please call 858.847.6700.

Operator:	Time Sent:	Return Original To: Germaine Sarda

OFFICIAL

PATENT 071949-2106

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: BUECHLER et al.

Title: NOVEL METHODS FOR THE ASSAY OF TROPONIN I AND T AND COMPLEXES OF TROPONIN I AND T AND SELECTION OF ANTIBODIES FOR USE IN IMMUNOASSAYS

Appl. No.: 09/687,051

Filing Date: 10/12/2000

Examiner: G. Gabel

Art Unit: 1641

CERTIFICATE OF FACSIMILE TRANSMISSION
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Alexandria, Virginia on the date below.

Germaine Sarda
(Printed Name)

Germaine Sarda
(Signature)

September 25, 2003
(Date of Deposit)

TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed please find:

[X] Communication to the Examiner (4 pages);

[X] Exhibit A (10 pages).

Respectfully submitted,

Date September 25, 2003

By *Barry Wilson*

FOLEY & LARDNER
Customer Number: 30542
30542
PATENT TRADEMARK OFFICE
Telephone: (858) 847-6722
Facsimile: (858) 792-6773

Barry S. Wilson
Attorney for Applicant
Registration No. 39,431

DLMR242706.1

#21 10/2/03

PATENT
071949-2106

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: BUECHLER et al.

Title: NOVEL METHODS FOR THE ASSAY OF TROPONIN I AND T AND COMPLEXES OF TROPONIN I AND T AND SELECTION OF ANTIBODIES FOR USE IN IMMUNOASSAYS

Appl. No.: 09/687,051

Filing Date: 10/12/2000

Examiner: G. Gabel

Art Unit: 1641

CERTIFICATE OF FACSIMILE TRANSMISSION
I hereby certify that this paper is being facsimile transmitted to the United States Patent and Trademark Office, Alexandria, Virginia on the date below.

Germaine Sarda
(Printed Name)

(Signature)

September 25, 2003
(Date of Deposit)

COMMUNICATION TO THE EXAMINER

Commissioner for Patents
Washington, D.C. 20231

Sir:

Applicants bring to the Examiner's attention recently obtained evidence which further supports Applicant's position that the claims under Appeal are in fact enabled.

To recap, the only issue on appeal is an alleged lack of enablement with regard to claims 69, 70, and 79-83, 86-89, 91 and 92. Applicants respectfully submit that the specification, which the Examiner acknowledges is enabling with regard to a pool of antibodies that specifically bind to each form of a cardiac specific troponin isoform of interest (*i.e.*, the free isoform, the isoform in binary complexes comprising another troponin component, and the isoform in ternary

complexes comprising two additional troponin components), is also enabling with regard to a single antibody (monoclonal antibody) that binds to each of the recited troponin forms.

During prosecution of the instant claims, Applicants provided a declaration of one of skill in the art, Dr. Kenneth F. Buechler, as evidence of enablement of the claimed invention. In the declaration, Dr. Buechler provided a reasoned scientific explanation as to why the skilled artisan, using the specification as a guide and only routine methods that are well known in the art, could practice the instantly claimed invention.

After filing an Appeal Brief in the instant case, Applicants discovered a publication by Giuliani et al., "Determination of cardiac troponin I forms in the blood of patients with acute myocardial infarction and patients receiving crystalloid or cold blood cardioplegia" *Clinical Chemistry*, 45(2): 213-222 (1999) , a copy of which is attached as Exhibit A. To determine the forms of cTnI circulating in the blood stream of patients with acute MI, Giuliani et al. developed three immunoenzymatic sandwich assays. See Abstract. The first assay used a combination of two monoclonal antibodies to cTnI. *Id.* This first assay, described in greater detail in the "Materials and Methods" section (p. 215, left column) of Giuliani et al., indicates the assay is for total cTnI, including free cTnI, and complexed cTnI. According to the assay, one monoclonal monoclonal antibody identified as "Ab2" is the "capture" antibody and is coated on microplates and the other monoclonal antibody identified as "Ab1" is an HRP conjugate. The specificity of the total cTnI assay is described in the "Results" section on page 216 (right column), where Giuliani et al. evaluated the ability of the first assay to detect various calibrators, including free cTnI, IC binary complex and IT binary complex and TIC ternary complex. Referring to Fig. 1 (A), Giuliani concludes that the total cTnI assay detected the free, binary complexed and ternary complexed forms of cTnI ("[W]e detected all forms of cTnI: free cTnI , the IC binary complex,

the IT binary complex, and the TIC ternary complex.").

It is respectfully submitted that Giuliani et al. demonstrates not one but two monoclonal antibodies that each bind to cTnI as free isoform, the isoform in binary complexes comprising another troponin component, and the isoform in ternary complexes comprising two additional troponin components. The capture monoclonal antibody (Ab2) in Giuliani et al.'s total cTnI assay must have been able to detect all four forms of cTnI (free, both binary forms and ternary form) as there would have been no signal with the conjugate monoclonal antibody with all four calibrators had the capture antibody not been able to bind to each of the cTnI forms. Likewise, the conjugate monoclonal antibody (Ab1) in Giuliani et al.'s total cTnI assay also must have been able to detect all four cTnI forms (free, both binary forms and ternary form) as there would have been no signal with all four calibrators if the conjugate monoclonal antibody was unable to react with each cTnI form.

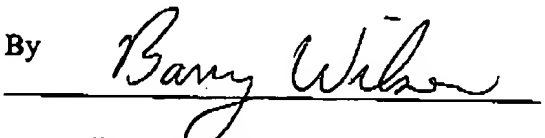
Giuliani et al., therefore, proves that Applicants' method of making even a single monoclonal antibody that binds to all forms (free, binary and ternary) of cTnI is feasible without undue experimentation. In view of the above, Applicant respectfully requests that the Examiner reconsider and withdraw the enablement rejection.

Conclusion

For the reasons discussed above, Appellants respectfully submit that all the claims are in condition for allowance, and respectfully request that the rejections be withdrawn or reversed, and that the claims be allowed to issue.

Respectfully submitted,

Date September 25, 2003

By 

Barry S. Wilson
Attorney for Applicant
Registration No. 39,431

FOLEY & LARDNER
Customer Number: 30542

30542
PATENT TRADEMARK OFFICE
Telephone: (858) 847-6722
Facsimile: (858) 792-6773